



## A mobilisation of walking: GPS technology and the exploratory urban walker

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# Future & Smart Cities

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We are delighted to present the first  
issue of Urban Pamphleteer

In the tradition of radical pamphleteering, the intention of this series is to confront key themes in contemporary urban debate from diverse perspectives, in a direct and accessible – but not reductive – way. The broader aim is to empower citizens, and inform professionals, researchers, institutions and policy-makers, with a view to positively shaping change.

### # 1 Future & Smart Cities

Cities have recently become a key object of interest for the computing and engineering sectors, academic researchers, and governments. In many countries, significant levels of public funding and commercial research activity are currently being directed towards innovation in this area. Yet the terms and expressions being used are still being defined, and as they emerge are used differently in specific disciplines and professions. Furthermore, urban publics are hardly represented within these business-led and policy-oriented discourses.

What objectives and principles should shape this field beyond enthusiasm for technological progress for its own sake? If cities are ‘engines for innovation and growth,’ it is in part because they play host to diverse values, interests, and aspirations. Likewise, innovation and growth are possible along multiple paths, with potential to advantage or to disadvantage any number of distinct communities. Cities are a shared resource and responsibility. How can we ensure that the public investments currently being made in future and smart cities will have a meaningful and socially equitable return? The contributors to this issue approach this crucial question from a variety of standpoints. They provide a ground for a more transparent and substantive debate about technologies and practices that are already significant, but which have consequences that are still unfolding. They also call for urgent attention to the question of how to bring citizens’ voices to the fore.

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For most urban dwellers in the UK walking has become a peripheral activity. It occurs at points of necessity—connecting a form of transportation, such as

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a train or a car, and a destination.<sup>1</sup> Generally speaking walking is not seen as an integral form of transport in its own right. Equally, as a recreational practice its range appears to be limited to the highly regulated spaces found in our parks and retail environments. This withering not only contributes to the obvious environmental and infrastructural pressures facing the contemporary city, but also impacts upon our health.<sup>2</sup> Most initiatives seeking to reverse

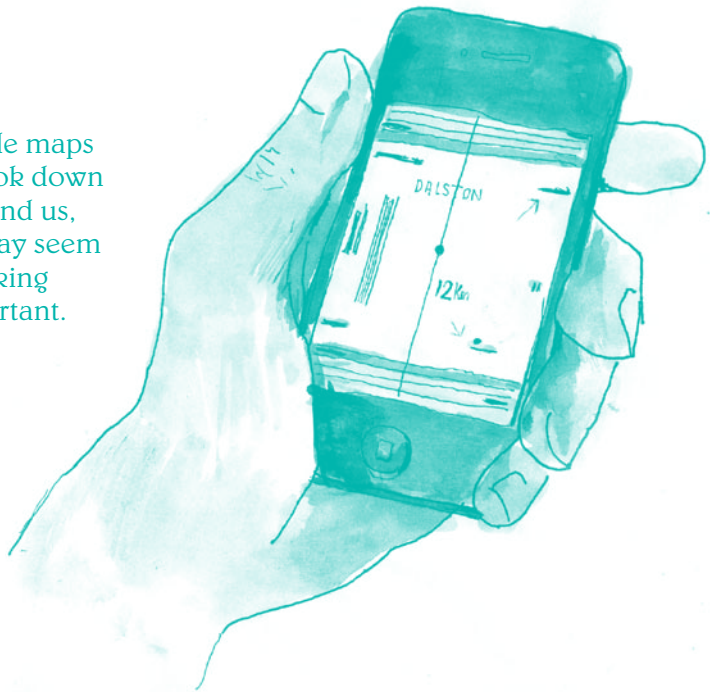
this trend concentrate on the promotion of walking as a reliable and viable mode of transport, a realistic means of linking A with B. While this emphasis is laudable it seems that if our inactivity is to be challenged we cannot ignore recreational walking. Indeed, walking numbers among the few viable forms of inexpensive recreation available to Western urban dwellers.<sup>3</sup> Through my practice-based PhD at Central Saint Martins I am focusing on how GPS-enabled mobile technology can encourage what I call ‘exploratory walking.’ In other words I am seeking to design a wayfinding application that encourages us to extend beyond our familiar range; a platform that supports ordinary people who want to walk out into the unknown.

The GPS-enabled mobile phone, or more specifically the GPS-enabled mobile map, continues to transform the way we navigate through the city.<sup>4</sup> From the walker’s perspective this transformation has brought many benefits, yet it seems that there has been no specific attendance to the needs of the urban exploratory walker. Having interviewed over twenty walkers during the first phase of my research, it has become clear that this is indeed the case. All of the participants had some experience of the technology and all were able to relate what they saw as the positive and negative aspects of mobile map use. Naturally many positives were identified, such as the convenience of being able to access their precise location, as well an increased sense of security. At the same time, there was a consistent hesitancy regarding the GPS-enabled mobile map. As one participant put it, ‘the positive aspect is you’re never lost and the negative aspect is that you’re never lost.’ When probed as to why never getting lost was viewed as negative, the participant explained that she believed this would result in an unhealthy dependency. Others, expressing similar concerns, noted that this dependency tended to disrupt the potential for social engagement. For example, they were less likely to ask for directions. Thus the exploratory walkers’ use of GPS-enabled technology presents a paradox.

Though they seek direction, the nature of their practice requires that they remain challenged by the negotiation of the environment. Not only does the standard GPS-enabled mobile map provide all the answers and therefore cancel any possibility of exploration, it also requires that the user pays full attention.



Current GPS-enabled mobile maps seem to demand that we look down at a screen rather than around us, at the world. Though this may seem a superficial complaint, looking around is surprisingly important.



The GPS-enabled mobile phone, or more specifically the GPS-enabled mobile map, continues to transform the way we navigate through the city. Drawing by Brian Dixon.

One participant offered a fairly accurate description of the phenomenon: ‘...you’re always constantly looking down if you’re looking at your map on your phone, which doesn’t help because you’re going to *miss* things.’ Indeed, this was cited as a common frustration. Current GPS-enabled mobile maps seem to demand that we look down at a screen rather than around us, at the world. Though this may seem a superficial complaint, looking around is surprisingly important. By doing so we are ‘place-learning,’ literally getting to know somewhere. This argument comes from the ecological psychologist James Gibson. Gibson claimed that walker experiences ‘ambulatory vision,’ that they walk and see rather than stand and see. Walking and seeing allows the individual to link together a series of ‘vistas’ or sightlines. Over an extended period of time involving multiple criss-crossings of routes, this allows the walker to compose a total image of their environment.<sup>5</sup> It is only through exploration (i.e. walking in unfamiliar places) that this total image can be constructed. Thus by ‘missing things’ we fail to collect the sightlines that allow us to come to know a city, to link together its paths and so gain a rich sense of place. An ‘exploratory walker’s map’ therefore would not only allow room for exploration but also limit the demands placed on the user.

The next phase of my research will see the launch of my practice-based inquiry whereby the interview findings will feed into the design of a GPS-enabled mobile map. Whatever the eventual outcomes of this process, the broader issues of support and encouragement of walking, whether exploratory or otherwise, will remain. To limit any



1 NICE, 'Walking and Cycling: Local Measures to Promote Walking and Cycling as Forms of Travel or Recreation' *Public Health Guidance* PH41. London: NHS, 2012.

2 I-Min Lee., Eric J Shiroma, Felipe Lobelo, Pekka Puska, Steven N Blair, Peter T Katzmarzyk, 'Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy,' *The Lancet* 380, (2012): 219–229.

3 P Z Siegel, R M Brackbill, G W Heath, 'The Epidemiology of Walking for Exercise: Implications for Promoting Activity among Sedentary Groups,' *American Journal of Public Health*, 85(5) (1995): 706–710.

4 Nigel Thrift, 'Remembering the technological unconscious by foregrounding knowledges of position,' *Environment and Planning D. Society and Space*, 22, 1 (2004), 175–190. John Urry, *Mobilities* (London: Polity, 2007).

5 James Gibson, *The Ecological Approach to Visual Perception* (Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1986), 198.

6 Paul Arthur and Romedi Passini, *Wayfinding: People, Signs, Architecture* (Toronto: McGraw Hill Ryerson, 2002). Per Møllerup, *Wayshowing* (Baden: Lars Müller, 2005).

7 Julia Turner, 'A World Without Signs', March 11, 2010, <http://www.slate.com/id/2246108/> (accessed 30 September 2010).

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discussion of urban wayfinding to the structure of the built environment and the signage contained within it is no longer tenable.<sup>6</sup> As mobile technology becomes more firmly embedded within the fabric of urban life it is likely that signage—especially officially-funded pedestrian signage—shall come to be viewed as increasingly redundant. Indeed some forecast a 'future without signs'.<sup>7</sup> If walkers are to be accommodated within this future an active debate must commence regarding possible substitutes for traditional signage. As the failed launch of Apple Maps demonstrated offering the public a similar but inferior product will not succeed. Perhaps it's time for GPS-enabled technology move 'beyond' the classic map. After all, multiple scenarios are possible. For example, emphasising a user's direction might prove a useful alternative to the pulsing blue dot hovering over a densely packed screen of names and shapes. Despite this potential for experimentation, wayfinding applications have done little to challenge conventional cartographic models. Surely it is time to play with location-based representation, to see what can be done. Imagining future scenarios for the 'smart' city, it is obvious that GPS-enabled mobile technology offers an array of possibilities. However, it is the challenges that we need to attend to. Designing for the future with full acceptance of technology's paradoxical promise is a literal and metaphorical first step towards true solutions that allow walkers to walk.

